

Chapter **1**

Introduction

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Chapter 1

Introduction

Myanmar, previously an oil-rich country, has seen its production decline year by year; this trend will continue if Myanmar does not find a new oil reserve. Meanwhile, oil demand has increased by an average of 17.9% annually over the last 5 years, reaching 5.9 million tonnes in 2019. Regarding supply, domestic refineries are aging, and production is declining, and Myanmar imports more than 95% of its petroleum products.

Under these circumstances, Myanmar Petroleum Enterprise (MPE), a state-owned refinery company, plans to build a new refinery with an annual production capacity of 5 to 10 million tonnes (100,000– 200,000 barrels a day). When the new refinery goes into operation, it will compete with petroleum products imported by private oil companies. In this regard, it is important to study strategic pricing of petroleum products supplied from the new refinery.

Research into Myanmar's oil distribution structure confirmed that there is a strong relation with the retail price by city and the spot price in Singapore. This means that a new refinery will have to compete with oil import cost of insurance and freight prices. Depreciation costs, utility costs, maintenance costs, labour costs, etc., are important for the competitiveness of a refinery. In addition, competitiveness can be enhanced by increasing the ratio of secondary equipment in the refinery, which increases the yield of high-value-added products. Since the details of the new refinery have not yet been determined, this study used the Nelson Index to propose a facility configuration that would be as competitive as the Singapore refineries. Also, as a reference, a ceiling price system for retail prices, which is activated when crude oil prices and product import prices rise sharply, is presented. Finally, the advantages, and disadvantages of having a refinery in the Myanmar were also summarised, and the precautions of having a domestic refinery listed.

For gas strategic pricing, demand for natural gas in Association of Southeast Asian Nations (ASEAN) countries is expected to grow faster than the total energy requirement in the region in the future. In parallel with the expansion of renewables, the share of natural gas in the energy mix in ASEAN is expected to expand from 21% in 2019 to 24% in 2050, according to IEEJ Energy Outlook (2022). The share of natural gas is also expected to be higher in Myanmar, where domestic gas resources are playing greater roles than in other ASEAN member countries, rising from 21% in 2019 to 35% in 2050.

With modest domestic production growth in ASEAN, Asia's import dependency (including other areas of Asia) could rise significantly from the current level of around 30% to nearly 50% by 2050. Therefore, it is clear that ASEAN needs stable investment in natural gas infrastructure, as well as supply sources from both within and outside of the region.

On a global basis, liquefied natural gas (LNG) plants with significant capacity have started operations in recent years and the world is expected to see further significant expansion of

production in the next decade, following the sanctioning of 184 million tonnes per year of capacity from 2017 to the first half of 2022. Notably for those projects that got final investment decisions during the period, more than half of assumed volumes have not decided on final destinations. Those new projects will compete for LNG customers, as well as against existing projects vying for contract renewals.

In other words, this creates additional opportunities for LNG players to make the market more flexible and contract prices more attractive. In the past, LNG used to be marketed and sold to ready users; the value chain was vertically integrated. Nowadays, those who have LNG may leverage their expertise to develop emerging markets and optimise volumes between different international markets. For example, Japanese LNG importers who have additional volumes, trading houses and upstream developers have been already active in other countries, (notably including ASEAN countries, including Myanmar) to create additional demand, sometimes competing and sometimes collaborating with players from other countries. This could significantly increase LNG consuming points to make market activities more flexible. Increasing transactions between a greater number of players should make it less difficult for them to create Asia's own LNG price indexes.

Although there are many challenges, such as the balance between LNG value chain vertical integration and increasing transaction flexibility, as well as the credit ratings of diversified parties, and different technical standards in different countries, Japanese players are expected to continue contributing to the development of the LNG market, in collaboration with national and private energy companies, and regional organisations, in the ASEAN region.

Due to the COVID-19 pandemic, the global LNG and natural gas industry has experienced a very turbulent period, starting from extremely low spot prices in the first half of 2020, stagnant project development activities with few investment decisions in the year, extreme volatility of spot LNG prices at the beginning of 2021, and culminating with the persistently expensive prices after the second half of the year.

During the past turbulent years, the world again learned that LNG was the most versatile energy source to respond to global energy needs. At the same time, the industry is observing growing awareness of the upcoming energy transition. The industry, as well as governments, will have to find ways to align economic prosperity and energy transition with cleaner energy sources. Myanmar also took advantage of competitive spot prices to introduce LNG in the country in 2020, and later experienced the difficult market conditions in 2022.